RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/575,816
Source: IFWP
Date Processed by STIC: 05/04/2006

ENTERED

IFWP

RAW SEQUENCE LISTING DATE: 05/04/2006
PATENT APPLICATION: **US/10/575,816** TIME: 14:08:55

Input Set : **A:\50508-2390.txt**
Output Set: **N:\CRF4\05042006\J575816.raw**

```
      3 <110> APPLICANT: Emory University
      4       Ensslin, Michael A.
      5       Shur, Barry A.
      7 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR MODULATING GAMETE ADHESION
      9 <130> FILE REFERENCE: 50508-2390
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/575,816
C--> 11 <141> CURRENT FILING DATE: 2006-04-14
     11 <150> PRIOR APPLICATION NUMBER: US 60/512,174
     12 <151> PRIOR FILING DATE: 2003-10-17
     14 <160> NUMBER OF SEQ ID NOS: 9
     16 <170> SOFTWARE: PatentIn version 3.3
     18 <210> SEQ ID NO: 1
     19 <211> LENGTH: 1281
     20 <212> TYPE: DNA
     21 <213> ORGANISM: Mus musculus
     23 <400> SEQUENCE: 1
     24 atgcaggtct cccgtgtgct ggccgcgctg tgcggcatgc tactctgcgc ctctggcctc     60
     26 ttcgccgcgt ctggtgactt ctgtgactcc agcctgtgcc tgaacggtgg cacctgcttg    120
     28 acgggccaag acaatgacat ctactgcctc tgccctgaag gcttcacagg ccttgtgtgc    180
     30 aatgagactg agagaggacc atgctcccca aacccttgct acaatgatgc caaatgtctg    240
     32 gtgactttgg acacacagcg tggggacatc ttcaccgaat acatctgcca gtgccctgtg    300
     34 ggctactcgg gcatccactg tgaaaccggt tgttctacac agctgggcat ggaaggggc     360
     36 gccattgctg attcacagat ttccgcctcg tctgtgtata tgggtttcat gggcttgcag    420
     38 cgctggggcc cggagctggc tcgtctgtac cgcacaggga tcgtcaatgc ctggacagcc    480
     40 agcaactatg atagcaagcc ctggatccag gtgaaccttc tgcggaagat gcgggtatca    540
     42 ggtgtgatga cgcagggtgc cagccgtgcc gggagggcgg agtacctgaa gaccttcaag    600
     44 gtggcttaca gcctcgacgg acgcaagttt gagttcatcc aggatgaaag cggtggagac    660
     46 aaggagtttt tgggtaacct ggacaacaac agcctgaagg ttaacatgtt caacccgact    720
     48 ctggaggcac agtacataag gctgtaccct gtttcgtgcc accgcggctg caccctccgc    780
     50 ttcgagctcc tgggctgtga gttgcacgga tgttctgagc ccctgggcct gaagaataac    840
     52 acaattcctg acagccagat gtcagcctcc agcagctaca agacatggaa cctgcgtgct    900
     54 tttggctggt acccccactt gggaaggctg gataatcagg gcaagatcaa tgcctggacg    960
     56 gctcagagca acagtgccaa ggaatggctg caggttgacc tgggcactca gaggcaagtg   1020
     58 acaggaatca tcacccaggg ggcccgtgac tttggccaca tccagtatgt ggcgtcctac   1080
     60 aaggtagccc acagtgatga tggtgtgcag tggactgtat atgaggagca aggaagcagc   1140
     62 aaggtcttcc agggcaactt ggacaacaac tcccacaaga agaacatctt cgagaaaccc   1200
     64 ttcatggctc gctacgtgcg tgtccttcca gtgtcctggc ataaccgcat caccctgcgc   1260
     66 ctggagctgc tgggctgtta a                                            1281
     69 <210> SEQ ID NO: 2
     70 <211> LENGTH: 426
     71 <212> TYPE: PRT
     72 <213> ORGANISM: mus musculus
     74 <400> SEQUENCE: 2
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PATENT APPLICATION: **US/10/575,816** TIME: 14:08:55

Input Set : **A:\50508-2390.txt**
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76 Met Gln Val Ser Arg Val Leu Ala Ala Leu Cys Gly Met Leu Leu Cys
77 1               5                  10                  15
80 Ala Ser Gly Leu Phe Ala Ala Ser Gly Asp Phe Cys Asp Ser Ser Leu
81             20                  25                  30
84 Cys Leu Asn Gly Gly Thr Cys Leu Thr Gly Gln Asp Asn Asp Ile Tyr
85         35                  40                  45
88 Cys Leu Cys Pro Glu Gly Phe Thr Gly Leu Val Cys Asn Glu Thr Glu
89     50                  55                  60
92 Arg Gly Pro Cys Ser Pro Asn Pro Cys Tyr Asn Asp Ala Lys Cys Leu
93 65                  70                  75                  80
96 Val Thr Leu Asp Thr Gln Arg Gly Asp Ile Phe Thr Glu Tyr Ile Cys
97                 85                  90                  95
100 Gln Cys Pro Val Gly Tyr Ser Gly Ile His Cys Glu Thr Gly Cys Ser
101             100                 105                 110
104 Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser
105         115                 120                 125
108 Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg Trp Gly Pro
109     130                 135                 140
112 Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala Trp Thr Ala
113 145                 150                 155                 160
116 Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu Leu Arg Lys
117                 165                 170                 175
120 Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg Ala Gly Arg
121             180                 185                 190
124 Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg
125         195                 200                 205
128 Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu
129     210                 215                 220
132 Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe Asn Pro Thr
133 225                 230                 235                 240
136 Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys His Arg Gly
137                 245                 250                 255
140 Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys Glu Leu His Gly Cys Ser
141             260                 265                 270
144 Glu Pro Leu Gly Leu Lys Asn Asn Thr Ile Pro Asp Ser Gln Met Ser
145         275                 280                 285
148 Ala Ser Ser Ser Tyr Lys Thr Trp Asn Leu Arg Ala Phe Gly Trp Tyr
149     290                 295                 300
152 Pro His Leu Gly Arg Leu Asp Asn Gln Gly Lys Ile Asn Ala Trp Thr
153 305                 310                 315                 320
156 Ala Gln Ser Asn Ser Ala Lys Glu Trp Leu Gln Val Asp Leu Gly Thr
157                 325                 330                 335
160 Gln Arg Gln Val Thr Gly Ile Ile Thr Gln Gly Ala Arg Asp Phe Gly
161             340                 345                 350
164 His Ile Gln Tyr Val Ala Ser Tyr Lys Val Ala His Ser Asp Asp Gly
165         355                 360                 365
168 Val Gln Trp Thr Val Tyr Glu Glu Gln Gly Ser Ser Lys Val Phe Gln
169     370                 375                 380
172 Gly Asn Leu Asp Asn Asn Ser His Lys Lys Asn Ile Phe Glu Lys Pro
```

RAW SEQUENCE LISTING DATE: 05/04/2006
PATENT APPLICATION: US/10/575,816 TIME: 14:08:55

Input Set : A:\50508-2390.txt
Output Set: N:\CRF4\05042006\J575816.raw

```
173 385                 390                 395                 400
176 Phe Met Ala Arg Tyr Val Arg Val Leu Pro Val Ser Trp His Asn Arg
177                 405                 410                 415
180 Ile Thr Leu Arg Leu Glu Leu Leu Gly Cys
181             420                 425
184 <210> SEQ ID NO: 3
185 <211> LENGTH: 404
186 <212> TYPE: PRT
187 <213> ORGANISM: mus musculus
189 <400> SEQUENCE: 3
191 Ala Ser Gly Asp Phe Cys Asp Ser Ser Leu Cys Leu Asn Gly Gly Thr
192 1               5                   10                  15
195 Cys Leu Thr Gly Gln Asp Asn Asp Ile Tyr Cys Leu Cys Pro Glu Gly
196             20                  25                  30
199 Phe Thr Gly Leu Val Cys Asn Glu Thr Glu Arg Gly Pro Cys Ser Pro
200         35                  40                  45
203 Asn Pro Cys Tyr Asn Asp Ala Lys Cys Leu Val Thr Leu Asp Thr Gln
204     50                  55                  60
207 Arg Gly Asp Ile Phe Thr Glu Tyr Ile Cys Gln Cys Pro Val Gly Tyr
208 65                  70                  75                  80
211 Ser Gly Ile His Cys Glu Thr Gly Cys Ser Thr Gln Leu Gly Met Glu
212                 85                  90                  95
215 Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser Ala Ser Ser Val Tyr Met
216             100                 105                 110
219 Gly Phe Met Gly Leu Gln Arg Trp Gly Pro Glu Leu Ala Arg Leu Tyr
220         115                 120                 125
223 Arg Thr Gly Ile Val Asn Ala Trp Thr Ala Ser Asn Tyr Asp Ser Lys
224     130                 135                 140
227 Pro Trp Ile Gln Val Asn Leu Leu Arg Lys Met Arg Val Ser Gly Val
228 145                 150                 155                 160
231 Met Thr Gln Gly Ala Ser Arg Ala Gly Arg Ala Glu Tyr Leu Lys Thr
232                 165                 170                 175
235 Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg Lys Phe Glu Phe Ile Gln
236             180                 185                 190
239 Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu Gly Asn Leu Asp Asn Asn
240         195                 200                 205
243 Ser Leu Lys Val Asn Met Phe Asn Pro Thr Leu Glu Ala Gln Tyr Ile
244     210                 215                 220
247 Arg Leu Tyr Pro Val Ser Cys His Arg Gly Cys Thr Leu Arg Phe Glu
248 225                 230                 235                 240
251 Leu Leu Gly Cys Glu Leu His Gly Cys Ser Glu Pro Leu Gly Leu Lys
252                 245                 250                 255
255 Asn Asn Thr Ile Pro Asp Ser Gln Met Ser Ala Ser Ser Ser Tyr Lys
256             260                 265                 270
259 Thr Trp Asn Leu Arg Ala Phe Gly Trp Tyr Pro His Leu Gly Arg Leu
260         275                 280                 285
263 Asp Asn Gln Gly Lys Ile Asn Ala Trp Thr Ala Gln Ser Asn Ser Ala
264     290                 295                 300
267 Lys Glu Trp Leu Gln Val Asp Leu Gly Thr Gln Arg Gln Val Thr Gly
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RAW SEQUENCE LISTING DATE: 05/04/2006
PATENT APPLICATION: US/10/575,816 TIME: 14:08:56

Input Set : A:\50508-2390.txt
Output Set: N:\CRF4\05042006\J575816.raw

```
268 305                 310                 315                 320
271 Ile Ile Thr Gln Gly Ala Arg Asp Phe Gly His Ile Gln Tyr Val Ala
272                 325                 330                 335
275 Ser Tyr Lys Val Ala His Ser Asp Asp Gly Val Gln Trp Thr Val Tyr
276             340                 345                 350
279 Glu Glu Gln Gly Ser Ser Lys Val Phe Gln Gly Asn Leu Asp Asn Asn
280         355                 360                 365
283 Ser His Lys Lys Asn Ile Phe Glu Lys Pro Phe Met Ala Arg Tyr Val
284     370                 375                 380
287 Arg Val Leu Pro Val Ser Trp His Asn Arg Ile Thr Leu Arg Leu Glu
288 385                 390                 395                 400
291 Leu Leu Gly Cys
295 <210> SEQ ID NO: 4
296 <211> LENGTH: 244
297 <212> TYPE: PRT
298 <213> ORGANISM: artificial
300 <220> FEATURE:
301 <223> OTHER INFORMATION: EEC - recombinant protein
303 <400> SEQUENCE: 4
305 Ala Ser Gly Asp Phe Cys Asp Ser Ser Leu Cys Leu Asn Gly Gly Thr
306 1               5                   10                  15
309 Cys Leu Thr Gly Gln Asp Asn Asp Ile Tyr Cys Leu Cys Pro Glu Gly
310             20                  25                  30
313 Phe Thr Gly Leu Val Cys Asn Glu Thr Glu Arg Gly Pro Cys Ser Pro
314         35                  40                  45
317 Asn Pro Cys Tyr Asn Asp Ala Lys Cys Leu Val Thr Leu Asp Thr Gln
318     50                  55                  60
321 Arg Gly Asp Ile Phe Thr Glu Tyr Ile Cys Gln Cys Pro Val Gly Tyr
322 65                  70                  75                  80
325 Ser Gly Ile His Cys Glu Thr Gly Cys Ser Thr Gln Leu Gly Met Glu
326                 85                  90                  95
329 Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser Ala Ser Ser Val Tyr Met
330             100                 105                 110
333 Gly Phe Met Gly Leu Gln Arg Trp Gly Pro Glu Leu Ala Arg Leu Tyr
334         115                 120                 125
337 Arg Thr Gly Ile Val Asn Ala Trp Thr Ala Ser Asn Tyr Asp Ser Lys
338     130                 135                 140
341 Pro Trp Ile Gln Val Asn Leu Leu Arg Lys Met Arg Val Ser Gly Val
342 145                 150                 155                 160
345 Met Thr Gln Gly Ala Ser Arg Ala Gly Arg Ala Glu Tyr Leu Lys Thr
346                 165                 170                 175
349 Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg Lys Phe Glu Phe Ile Gln
350             180                 185                 190
353 Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu Gly Asn Leu Asp Asn Asn
354         195                 200                 205
357 Ser Leu Lys Val Asn Met Phe Asn Pro Thr Leu Glu Ala Gln Tyr Ile
358     210                 215                 220
361 Arg Leu Tyr Pro Val Ser Cys His Arg Gly Cys Thr Leu Arg Phe Glu
362 225                 230                 235                 240
```

RAW SEQUENCE LISTING DATE: 05/04/2006
PATENT APPLICATION: US/10/575,816 TIME: 14:08:56

Input Set : A:\50508-2390.txt
Output Set: N:\CRF4\05042006\J575816.raw

```
365 Leu Leu Gly Cys
369 <210> SEQ ID NO: 5
370 <211> LENGTH: 365
371 <212> TYPE: PRT
372 <213> ORGANISM: artificial
374 <220> FEATURE:
375 <223> OTHER INFORMATION: ECC - recombinant protein
377 <400> SEQUENCE: 5
379 Glu Thr Glu Arg Gly Pro Cys Ser Pro Asn Pro Cys Tyr Asn Asp Ala
380 1               5                  10                  15
383 Lys Cys Leu Val Thr Leu Asp Thr Gln Arg Gly Asp Ile Phe Thr Glu
384             20                  25                  30
387 Tyr Ile Cys Gln Cys Pro Val Gly Tyr Ser Gly Ile His Cys Glu Thr
388         35                  40                  45
391 Gly Cys Ser Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser
392     50                  55                  60
395 Gln Ile Ser Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg
396 65                  70                  75                  80
399 Trp Gly Pro Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala
400                 85                  90                  95
403 Trp Thr Ala Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu
404             100                 105                 110
407 Leu Arg Lys Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg
408         115                 120                 125
411 Ala Gly Arg Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu
412     130                 135                 140
415 Asp Gly Arg Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys
416 145                 150                 155                 160
419 Glu Phe Leu Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe
420                 165                 170                 175
423 Asn Pro Thr Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys
424             180                 185                 190
427 His Arg Gly Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys Glu Leu His
428         195                 200                 205
431 Gly Cys Ser Glu Pro Leu Gly Leu Lys Asn Asn Thr Ile Pro Asp Ser
432     210                 215                 220
435 Gln Met Ser Ala Ser Ser Ser Tyr Lys Thr Trp Asn Leu Arg Ala Phe
436 225                 230                 235                 240
439 Gly Trp Tyr Pro His Leu Gly Arg Leu Asp Asn Gln Gly Lys Ile Asn
440                 245                 250                 255
443 Ala Trp Thr Ala Gln Ser Asn Ser Ala Lys Glu Trp Leu Gln Val Asp
444             260                 265                 270
447 Leu Gly Thr Gln Arg Gln Val Thr Gly Ile Ile Thr Gln Gly Ala Arg
448         275                 280                 285
451 Asp Phe Gly His Ile Gln Tyr Val Ala Ser Tyr Lys Val Ala His Ser
452     290                 295                 300
455 Asp Asp Gly Val Gln Trp Thr Val Tyr Glu Glu Gln Gly Ser Ser Lys
456 305                 310                 315                 320
459 Val Phe Gln Gly Asn Leu Asp Asn Asn Ser His Lys Lys Asn Ile Phe
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/04/2006
PATENT APPLICATION: **US/10/575,816** TIME: 14:08:57

Input Set : **A:\50508-2390.txt**
Output Set: **N:\CRF4\05042006\J575816.raw**

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:4,5,6,7

VERIFICATION SUMMARY DATE: 05/04/2006
PATENT APPLICATION: **US/10/575,816** TIME: 14:08:57

Input Set : **A:\50508-2390.txt**
Output Set: **N:\CRF4\05042006\J575816.raw**

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date